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IV. Remarks and Conclusion

Claims 32-35 and 64-68 are currently pending. Claim 68 was newly added. Support for Claim 68 can be found on page 3, lines 17-20 of the specification. Claims 1-31 and 36-63 have been cancelled without prejudice or disclaimer to pursue the Claims of Invention II, as defined by the Examiner. The cancellations made were not based on reasons related to patentability under 35 U.S.C. §§ USC 101, 102, 103 and/or 112. No estoppel should result from said cancellations. Applicants expressly reserve the right to pursue the non-elected subject matter in a divisional application.

In line item 7, the Examiner contends that Applicant does not have support in the specification for fragments of the protein. While Applicant does not agree, Applicant has cancelled the rejected subject matter while expressly reserving the right to pursue the cancelled subject matter in a divisional application. Accordingly, the rejection is believed overcome.

In line item 8, the rejection is believed overcome for the reasons stated above.

In line item 9, the Examiner maintained previous objections for lack of antecedent basis. Applicant has amended the Claims and respectfully requests removal of the rejection.

In line item 10, the Examiner maintains his 102(b) rejection of Claims 32-35 and 64-65 as being anticipated by the Schettters article. The Examiner asserts that the Schettters article discloses a vaccine comprising a B. canis associated protein in a supernatant. The Examiner contends that SEQ ID NO: 2 of Applicants' invention is an inherent property of the disclosed Schettters article supernatant. Applicants respectfully request reconsideration in light of this response. Applicant's response has adequately illustrated that BcVir15 is not an exoantigen and that it is not present in the culture supernatant described by Schettters.

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Consequently, the publication of the supernatant does not, and cannot anticipate BcVir15 of the present application as the discussion below will make clear.

Applicant is very familiar with this disclosure, as the assignee of the instant application and of the patent that originated from the teachings of the Schetter article are one in the same, Akzo Nobel. The proteins in the supernatant described in the Schetter article are known as exoantigens and are the subject of US patent 6,045,806.

To differentiate the BcVir15 and BcVir32 proteins of the invention from these exoantigens, immunoprecipitation experiments were performed and outlined in Example 2, the results of which are presented in Figure 8.

In brief: rabbit polyclonal antibodies were produced (p. 26) directed against E. coli expressed proteins of BcVir15 (ORF 1) or BcVir32 (ORF 2) (p. 25). Next, radioimmunoprecipitation assays of ³⁵S labeled parasite cultures were performed (p. 27).

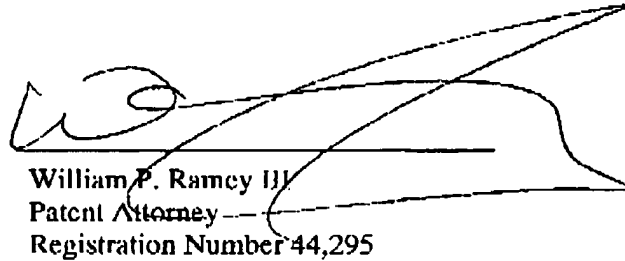
Results are described on pages 29-30 of the specification, and presented in Figure 8: in lanes 3, of Figure 8A and 8B, fractions of labeled antigens from the Babesia culture were incubated with a specific antibody. As is clear from these results, a band of about 15 kDa was specifically precipitated only in the total antigen fraction of panel A, but not in the exoantigen fraction of panel B. This is also described in the specification, on p. 29, ll. 23-27.

The exoantigens described by Schetters et al., are not recognized by an antiserum specific for the BcVir15 protein of the invention. Therefore BcVir15 is not an exoantigen, and is not similar to the proteins in US 6,045,806. Accordingly, Applicants respectfully request reconsideration.

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In conclusion, Applicant believes the Claims in a condition for allowance. Applicant respectfully requests that the Examiner contact Applicants' attorney with any questions. Please charge any required fees and credit any credits to deposit account 02-2334. Further, please charge deposit account 02-2334 for the extension of time fee for two months.

Respectfully Submitted,



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